



U.S. Army seeks stronger integration for Air and Missile Defence

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he field of Air and Missile Defence is facing a host of new requirements which are, in turn, driving many nations to seek upgrades to their capability. Over the years spent in Afghanistan and Iraq, US and ISAF troops have contested with adversaries that leveraged low-cost, low-tech capabilities to offset the tactical and technical advantages held by coalition forces. Mortars, rockets, and improvised rocket-

assisted munitions all contributed to disrupting the sustainment of command and control functions, especially from fixed operating bases. In response to this, the intervening forces developed capabilities such as Counter Rocket, Artillery, and Mortar (C-RAM) systems to limit the effectiveness of their defence.

While generally successful after a decade or so of research and enhancement, there is some concern among analysts and commanders that the focus of the asymmetric missile threat compared to what some are seeing as a renewed focus on

the conventional threat of ballistic missiles presented by the re-emergence of Russian aggression in Eastern Europe, as well as other high-end threats. The latter includes the issue of anti-satellite missiles understood to be under development in China, which presents a very real risk to communication and networking across forces in the event of large-scale combat operations.

“Decreasing costs and increasing availability of systems such as unmanned aerial systems require AMD forces to continue to evolve to

defeat new threats,” said Brigadier General Donald Fryc, Chief of the US Army’s 32nd Army Air and Missile Defense Command (32d AAMDC). “This continued threat evolution necessitates continued modernization of air and missile defense forces to counter these threats, while preventing the development of a “gap” between these threats and AMD capabilities.”

32d AAMDC, headquartered at Fort Bliss, Texas, is a theatre-level Army AMD multi-component organisation responsible for planning, coordinating, integrating, synchronising, and executing joint (or Combined Theater Air and Missile Defense) operations in Central Command. This incorporates the four operational elements (or pillars) of theatre missile defence (TMD): passive defence, active defence, attack operations, and battle management/command, control, communications, computers, and intelligence (BM/C4I) to protect contingency, forward deployed, and reinforcing forces, as well as ‘designated theatre strategic assets’.

As Fryc and his international counterparts will tell you, the decreasing costs and wider proliferation of ballistic missile, cruise missile, and unmanned aerial system technologies are now the biggest – and most immediate – challenges to the AMD

community. A relatively low investment in some or all of these technologies can provide an adversary with the means to disrupt operations. However, the greatest potential opportunity in progressing AMD capabilities lies with increased cooperation among partner nations to counter these evolving threats.

“Each of us,” Fryc said, “has a unique blend of capabilities that, when brought together, creates the synergy necessary to defeat potential threats.”

“Continued multi-service and multinational cooperation is essential to maintain an AMD force”

“From a 32d AAMDC perspective, we need to develop exercises focused on increasing interoperability across multiple Geographic Component Command Areas of Responsibility. Given the increased proliferation of longer-range ballistic missiles, the threat is no longer confined to a single AOR. An adversary



Brig Gen Fryc
anticipates a series
of events for 2015

in the CENTCOM AOR can launch a missile that traverses the EUCOM AOR, before impacting somewhere in the NORTHCOM AOR. This spans three different AAMDC’s and a number of Allied nations. ‘Sufficient’ interoperability would require the ability to detect, classify, and track targets over a long distance and to coordinate and direct engagements between multiple partners.”

It is this extensive level of integration that is the key aim of most AMD forces, but given the increasingly complex operational environment of today, there is an ever-increasing need for them to work together in order to maintain situation awareness of the three-dimensional battlefield. From sensor to shooter, AMD operations must leverage differing capabilities of coalition partners to offset any potential weaknesses.



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Likewise, as the threats themselves become more sophisticated, combined and joint AMD forces will need to become more adept at identifying potential threats and coordinating fires between the systems of different services and countries.

Fryc believes that this “requires a common surveillance and early warning architecture disseminated to all members of the AMD force. Command and control systems and processes should enable AMD forces to identify the threat, analyze potential responses, select the best response, and direct action in a relatively short period of time.

“At the same time, there will always be a ‘human in the loop’ that needs to be able to assess each situation and apply proper judgment in directing AMD engagements. Information overload becomes a very real possibility and we must ensure our systems and processes minimize the risks associated

with too much information while enabling timely decision-making.”

In the summer of 2015, the 32d AAMDC will host a Combined Live Fire Event at Fort Bliss that will help enhance interoperability between partner nations over multiple AORs. The intention is to facilitate a series of what it calls Combined Tactical Discussions, or academics, to provide a shared understanding of Kill Chain Procedures within each AOR. These discussions will pave the way for creating procedures to leverage the differing capabilities of partner nations to defeat common threats. The event will culminate with Patriot Live Fire exercises, using the procedures and threat scenarios relevant to each of the CENTCOM, PACOM, and EUCOM AORs.

Before this, Fryc will be journeying to Seville, Spain, for the annual Integrated Air and Missile Defence conference to

brief multinational forces and professionals within the defence industry. The aim is to help everyone from operators to manufacturers and solution-providers to understand the full spectrum of requirements as the entire community ventures into a new era of missile defence operations.

“Continued multi-service and multinational cooperation is essential to maintain an AMD force that keeps pace with evolving and emerging air and missile threats,” Fryc explained. “Events such as these discussions and AMD concept drills help develop procedures for countering threats. Strengthening and maintaining relationships with our coalition partners enhances AMD interoperability, so cooperation will ensure a strong and effective deterrent to potential adversaries, while also setting the conditions to defeat threats should deterrence fail.”